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SAM TEST RANGE KAPUSTIN YAR/VLADIMIROVKA MISSILE TEST CENTER USSR

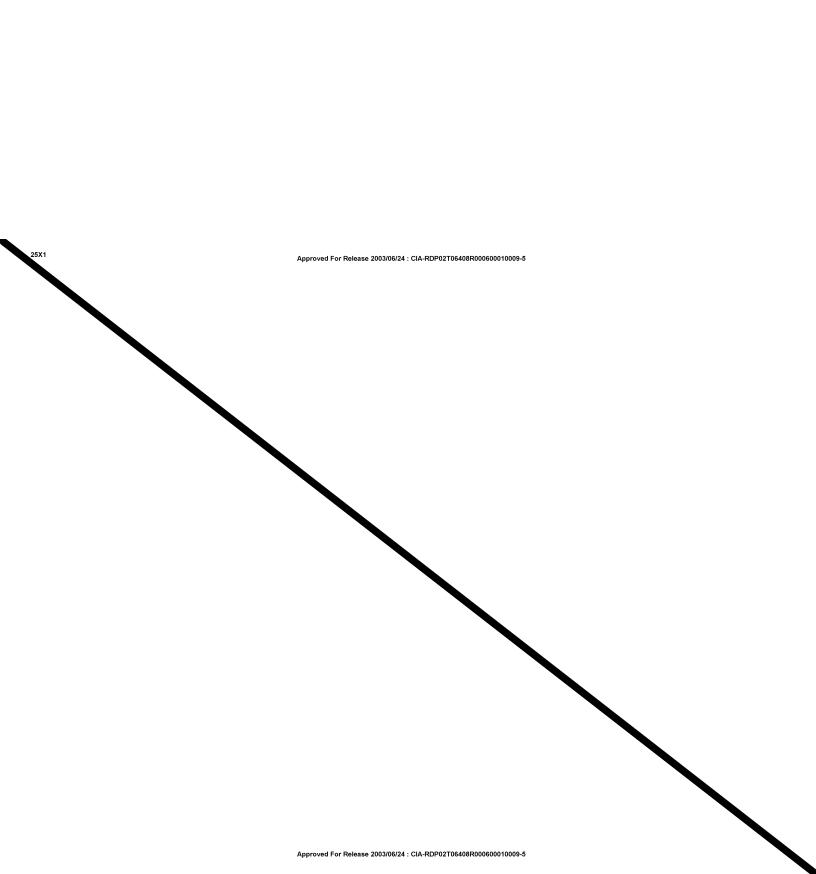
PART I

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Approved For February Section 24 CIA-RDP02T06408R000600010009-5

SAM TEST RANGE KAPUSTIN YAR/VLADIMIROVKA MISSILE TEST CENTER USSR

PART I

SEPTEMBER 1967

NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER

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TOP SECRET Approved For Release 2003/06/24: CIA-RDP02T06408R000600010009-5 LIST OF ILLUSTRATIONS Page Figure 1. Kapustin Yar/Vladimirovka Missile Test Center, USSR (location map)..... Figure 2. SAM Launch Complex 25X1 Figure 3. SAM Launch Complex, Figure 4. Precision Tracking Radar Facility, 25X1 Figure 5. Precision Tracking Radar Facility, Figure 6. Precision Tracking Radar on Associated Drive-through Structure (perspective and line drawing) Figure 7. Probable Long Range SAM Launch Facility, 25X1 Figure 8. Probable Long Range SAM Launch Facility Figure 9. R&D Launch Area, 25X1 Figure 10. R&D Launch Area, 11 Figure 11. R&D YO YO Guidance Site, 12 25X1 Figure 12. R&D YO YO Guidance Site, Figure 13. YO YO Radar Antennas at R&D YO YO Guidance Site, (photographs and line drawings) Figure 14. SA-1 (herringbone) Launch Site, 25X1 14 Figure 15. SA-1 (herringbone) Launch Site Figure 16. SA-1 YO YO Guidance Site, 25X1 Figure 17. SA-1 YO YO Guidance Site, Figure 18. SA-2 Launch Area, 25X1 Figure 19. SA-2 Launch Area Figure 20. SA-3 Launch Area Figure 21. SA-3 Launch Area Figure 22. SAM Training Site Figure 23. SAM Training Site Figure 24. SAM Training Site Figure 25. SAM Training Site 26 Figure 26. SAM Training Site

This report which requested report (PIC/JR

PREFACE

This report is in partial response to CIA requirement C-DI6-83,665, which requested a basic report completely updating the latest comprehensive report (PIC/JR-1008/61, March 1961) 1/ of the facilities at the Kapustin Yar SAM Test Range, USSR. This requirement includes a request for detailed photo analysis of the following areas:

- a. SAM Launch Complex;
- b. SAM Launch Complex Support Areas;
- c. SAM Instrumentation Sites;
- $\mbox{\bf d. Electronics Test Facility (formerly designated Electronics Research and Development Area);} \\$
- e. Kapustin Yar Airfield;
- f. SAM Base Support Complex.

This report satisfies part (a) above, which encompasses the most extensive portion of the requirement. Three forthcoming reports will cover the remainder of the SAM rangehead facilities.

Photography used in the preparation of this report includes

Mission

numbers and related photographic data may be obtained from the references at the end of the report; therefore dates alone are referenced in textual chronologies.

The precision target plots included in this report are a mathematically rectified projection of the area. Plots are compiled by utilizing precision mensuration instruments, and image interpretation is performed with the aid of stereoscopic viewing equipment. Identifiable image points are measured and their coordinate values mathematically transformed by computer. This transformation corrects for camera and attitude (pitch, roll, and yaw) induced distortions but does not correct for displacement due to ground relief and object height.

These target plots represent the most accurate data compiled to date, but the user is cautioned to exercise care in scaling distances or determining azimuths from these plots, inasmuch as relief can introduce errors in distance and alignment. The horizontal dimensions given are accurate to within plus or minus 5 feet or 5 percent, whichever is greater.

25X1

FIGURE 1. KAPUSTIN YAR/VLADIMIROVKA MISSILE TEST CENTER, USSR.

INTRODUCTION

The Kapustin Yar Surface-to-Air Missile Test Range is part of the Kapustin Yar/Vladimirovka Missile Test Center (KY/Vlad MTC), USSR. It is approximately 50 nautical miles (nm) east of Volgograd (Stalingrad), on the eastern side of the Volga River. The SAM Rangehead, located north of Kapustin Yar and generally west of the surface-to-surface missile rangehead, consists of a SAM launch complex, 3 SAM training sites, a SAM warhead area, a SAM housing and support area, a missile checkout and storage area, a troposcatter and microwave communications facility, an electronics test facility, an airfield, a SAM marshalling area, a SAM base support and housing area, 11 instrumentation sites, and an operational SA-2 site.

This report covers the SAM launch complex and the 3 SAM training sites located along the western periphery of the SAM rangehead (Figure 1). The rectified line drawings and measurements presented in this report are based primarily on photography of However, other photography was utilized where coverage was lacking or photography provided better mensural data.

A number of significant changes have occurred at the SAM rangehead since the latest comprehensive report, $\underline{1}/$ which was based primarily on

photography accomplished in Among these changes within the SAM launch complex are the addition of new launch sites at the SA-2 and SA-3 launch areas, the addition of new launch sites at the R & D launch area, along with a change in function of 1 of its sites the construction of a probable long range SAM launch facility, the construction of a precision tracking radar facility, movement of the YO YO Radar at the R & D YO YO Guidance Site, and the construction of the 3 SAM training sites. This report contains a description of facilities and activity, in chronological sequence, and includes rectified line drawings, photographs, and photogrammetric data on components of the SAM launch complex and the 3 SAM training sites. Tabular chronologies of activity, which denote the presence and identification of missiles and/or missilerelated equipment observed at a specific area, are presented separately from the text. These tables are based exclusively on photography and are designated to show the type and degree of activity at the time of specified coverage.

Annotated photos and rectified line drawings are shown for components of the SAM launch complex and 2 of the 3 SAM training sites. SAM Training Site C, which has been covered by photography only, is shown on an annotated photo without a rectified line drawing.

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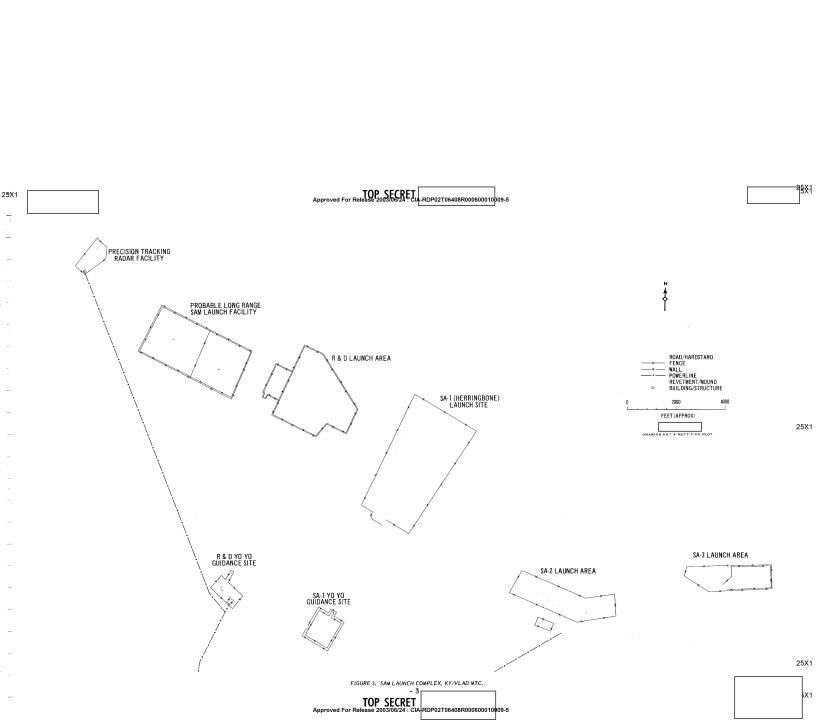
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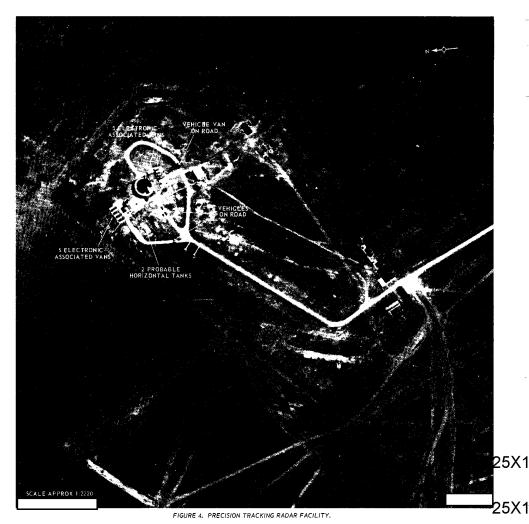
SAM LAUNCH COMPLEX

The SAM Launch Complex (Figures 2 and 3) is located along 2 all-weather roads that branch eastward and westward from the northern terminus of the all-weather SAM Launch Complex main service road. It includes the following 8 components: the Precision Tracking Radar Facility (included within the SAM launch complex because of its location, rather than because of its function); the Probable Long Range SAM Launch Facility; the R & D Launch Area and its associated YO YO Guidance Site; the SA-1 (herringbone) Launch Site and its associated YO YO Guidance Site; the SA-2 Launch Area; and the SA-3 Launch Area.

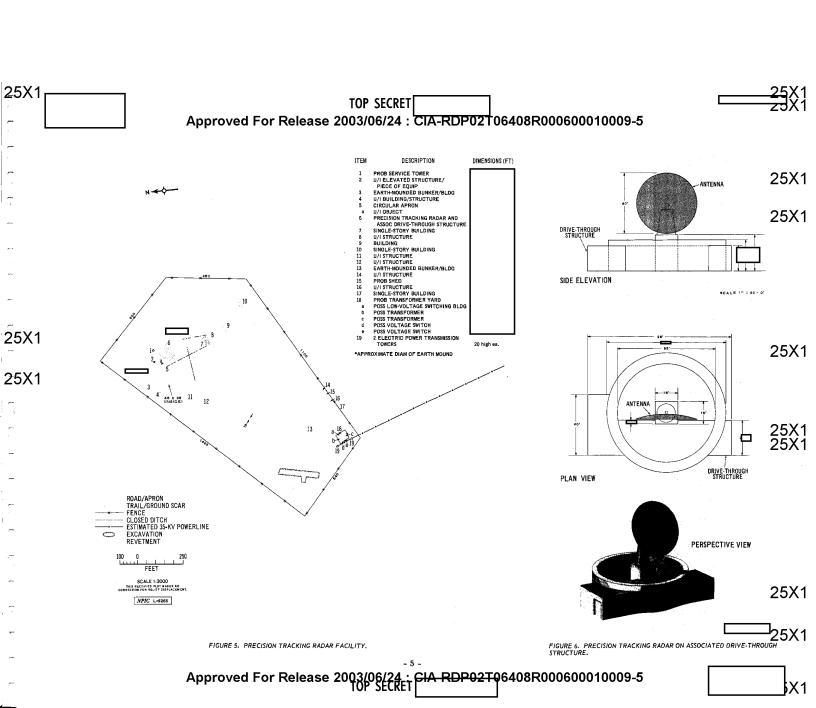
PRECISION TRACKING RADAR FACILITY

The Precision Tracking Radar Facility (Figures 3, 4, and 5) is at the terminus of the western branch of the SAM 25X1 Launch Complex main service road at approximately 48-49N 45-42E. The facility (formerly designated probable ${\rm SAM\ launch\ area)\ \underline{2}/\ was\ first\ observed\ under\ construction}$ 25X1 in but was not present in There is no photographic coverage of the facility between these 2 dates. The major portion of the facility was under con-25X1 struction by probably near completion. with some of its structures Ву 25X1 By revealed a probable transformer yard and 2 electrical power transmission towers which connect a powerline that formerly terminated at the southern portion of the R & D YO YO Guidance Site (Figure 3 and 5). Although not readily identifiable until the probable transformer yard and transmission towers could have been present or under construction as early as The powerline entering the facility is estimated to a 40-foot-diameter radar dish (Figure structure (item 6, Figure 5). At that time, the identification of the facility was changed from probable SAM launch area to Precision Tracking Radar Facility. How-

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through structure probably was present as early as
The dish appears to be mounted on a
pedestal in the center of the ring-shaped structure and
is attached so as to allow the dish to rotate from a near
horizontal boresight position to a vertical or stowed po-
sition.
As of there were no apparent external
changes at the facility. Electronic-associated vans and
probable communication vehicles/vans on the 2 paved
rectangular-shaped aprons (Figure 4) have been revealed
on
PROPERIE LONG BANGE CAM
PROBABLE LONG RANGE SAM
LAUNCH FACILITY
The Probable Long Range SAM (PLRS) Launch Facility
(Figures 3, 7 and 8) is located on the northern side of the
western branch of the SAM Launch Complex main service
road, between the Precision Tracking Radar Facility and
the Research and Development (R & D) Launch Area at
approximately 48-48N 45-43E.
Construction activity at the launch facility (formerly
designated, in its early stages of development, as an un-
identified secured area) 2/ was first observed in
The launch facility probably can be negated in
and definitely in Some
ground scarring was observed in the area of the launch
facility as early as however the scarring was more likely associated with the precision tracking radar
facility than with the PLRS launch facility. On
two buildings were observed under construction
(items 8 and 10, Figure 8). The smaller of the 2 build-
ings, appeared externally complete
while the larger building,
probably was not externally complete until
By an area approximately 2,620 by
2,135 feet was secured by a single fence, with construction
underway for a second fence, inside and paralleling the
one present. By the area of the launch fa-
cility had practically doubled (approximately 4,650 by
2,135 feet), along with ground scarring that formed a T-

vealed that the radar dish atop the associated drive-

25X1

25X1

25X1

25X1

25X1

25X1

25X1

25×1

25X1

25X1

25X1

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shaped pattern at the western end of the launch facility

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shaped pattern at the western end of the launch facility and a hexagonal-shaped pattern near the southeastern corner.

Photography of revealed 4 hardstands under construction along the top of the T-shaped pattern. The hexagonal-shaped pattern, one of its sides being part of the main service road for the launch facility, could be identified as a launch site under construction, with 2 launch positions and a centrally located control area that was occupied by several unidentifiable vehicles/pieces of equipment.

On photography of cable scarring was observed extending from the launch site control center to each of the 2 launch positions. A third cable scar extended westward from the launch site control facility 3,365 feet to the southernmost hardstand in the tracking/guidance area where it probably connects with the electronics equipment associated with the engagement radar.

The presence of equipment at the launch site and on the hardstands could be confirmed on photography of

	verified the location of
the cable scars observed on	along with
several other cable scars that ext	end from the 2 smaller
hardstands (items 1 and 3, Figure	8) toward the vicinity of
the building in th	e radar control center.
Probable launchers, 25 feet long,	were observed at the 2
launch positions and the V-type ra	ail pattern appeared for
the first time at the more northerly	launch position (Launch
Position 1). An azimuth of	bisects
the V-type rails. The	azimuth, extended,
passes in the proximity of Rada	Position 1. Ground
scarring, where the V-type rails	appeared, was observed
on At the trac	king/guidance radar fa-
cility the 2 larger hardstands are	e occupied by the PLRS
engagement radar, while the sma	aller 2 hardstands are
each occupied by 1 van and 1 p	probable generator/con-
verter, cable-connected to the rada	rs. Four antenna trans-
port vehicles are collocated adjac	ent to each of the 2 end
hardstands (Figure 7).	

Although photography of could be classified as having the best interpretability up to that date, no significant external changes, including equipment, could

be observed, except for a small vertical mast of undetermined function that was observed within the secured area just to the northwest of the entranceway. 25X1

R

25X1

25X1

25

25X1

25X1

25×1

25X1

25X1

1

25X-1

25X1

R AND D LAUNCH AREA

The Research and Development (R and D) Launch Area (Figures 3, 9, and 10) is at the northern terminus of the SAM Launch Complex main service road at approximately 48-48N 45-44E. The launch area was first observed on photography of and cannot be negated. This launch area, which probably was used in developing both the SA-1 and SA-2 systems, consists of 5 launch sites (designated A, C, D, E, and F), an electronic facility (formerly designated Launch Site B), a revetment area, and an R and D YO YO guidance site. The latter, reported separately (page 13), is approximately 8,600 feet south-southwest of Launch Sites A and C. Launch Sites E and F, along with the revetment area, were constructed and can therefore be negated. Former Launch Site B and possibly D have apparently changed (For the R and D Launch function since Area, all item designators without a referenced figure number will be found in Figure 10.)

LAUNCH SITE A

This site, which was first observed in is similar to a 6-position launch segment of an SA-1 herringbone-type launch site (Figures 10 and 15). The segment includes 2 launch roads, each having 3 launch positions with SA-1 missile erector/launchers. Midway between the launch roads is a square-shaped hardstand (item 39, Figure 10) which is probably used as a control center for the segment. In regard to placement and distances to launch positions, the location of this hardstand compares favorably with the control bunkers found at operational SA-1 herringbone-type launch sites. Adjacent to each launch position is a small structure that serves as a probable cable junction box for its erector/ launcher. Two circular aprons, contiguous to the northernmost launch road, are apparently associated only with the R and D functions of the SA-1 system, since they are not found at operational SA-1 herringbone-type launch

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25X1	Approved For F	TOP SECRET (Release 2003/06/24 : CIA-RDP02T 06408	25X1 R000600010009-5
25×1 25×1 25×1 25×1 25×1 25×1	missile-related equipment observed at Launch Site A see Table 1.) R AND D LAUNCH AREA ELECTRONIC FACILITY (FORMER LAUNCH SITE B) This site (later facility) (Figure 10) was first observed in and was either complete or in a late stage of construction. On the configuration of the site appeared to be circular, with 6 approximately square launch positions at equal intervals along the inside of a hard-surfaced perimeter road (See photo inset, Figure 10). A paved, circular unrevetted guidance apron is centrally located, with a paved road connecting it to the perimeter road. Buried cables extended from the guidance area to each of the launch positions and 4 of the launch positions are interconnected by buried cables. Another buried cable extends from the guidance area to a probable control building (item 31) south of the area's service road. A cylindrical tank (item 32) n diameter, is adjacent to the entrance of the site's perimeter road. By all but 2 of the former launch positions had deteriorated and 3 radar mounds were complete or in a late stage of construction. Two of the mounds are outside the former site's perimeter road and 1 inside the road (items R1, R2, and R3). By occupancy of the mounds could be confirmed and the radars identified by type. Since completion of the mounds the configuration of the facility has not changed through (For information regarding missiles and/or missile-related equipment ob-	LAUNCH SITE C This site, first observed in is somewhat similar to a 6-position launch segment of an SA-1 herringbone-type launch site (Figures 10 and 15). It is also similar to Launch Site A in that is has 2 launch (or rib) roads, each with 3 launch positions occupied by SA-1 missile erector/launchers. Midway between the launch roads is an approximately 55-foot-square area that probably is used as the control center for the segment (item 18). A probable tank (item 19) is adjacent to the probable control center. Three circular concrete aprons (items C2, 17 and 21) form a triangular pattern around and approximately equidistant from the probable control center. One of the aprons (item C2) is astride the northernmost launch road and serves as 1 of the 6 launch positions. All 3 of the circular aprons are served by paved service roads. An earth-covered bunker (item 15) is near 1 of the circular aprons. The small objects adjacent to each launch position (in some cases only 1 object) probably are cable junction boxes. Construction of this site probably was complete when first observed in 1957, but poor quality of photography limited detailed interpretation of the site's components. However, no apparent external changes have occurred from regarding missiles and/or missile-related equipment observed at Launch Site C see Table 3.) LAUNCH SITE D This site was first observed in and does not appear to be designed for testing of any specific/known missile system (Figure 10). It consists of 3 circular paved aprons (items 9, 10, and 14) served by paved service roads. One apron (item 14) has a triangular-shaped parking area adjoining it. The site contains an earth-covered bunker near an approximately 55-foot-square area (items 13 and 11). The area is similar to the one at Launch Site C. Next to the earth-covered bunker is an unidentified structure (item 12) apparently connected by a buried cable to Launch Site C. The site also contains 2 excavations, somewhat	similar in shape to an SA-2 launch position. These excavations have always appeared unoccupied. Construction of the site probably was complete when 25 × 1 first observed in
-	11	TOP SECRET	25X1

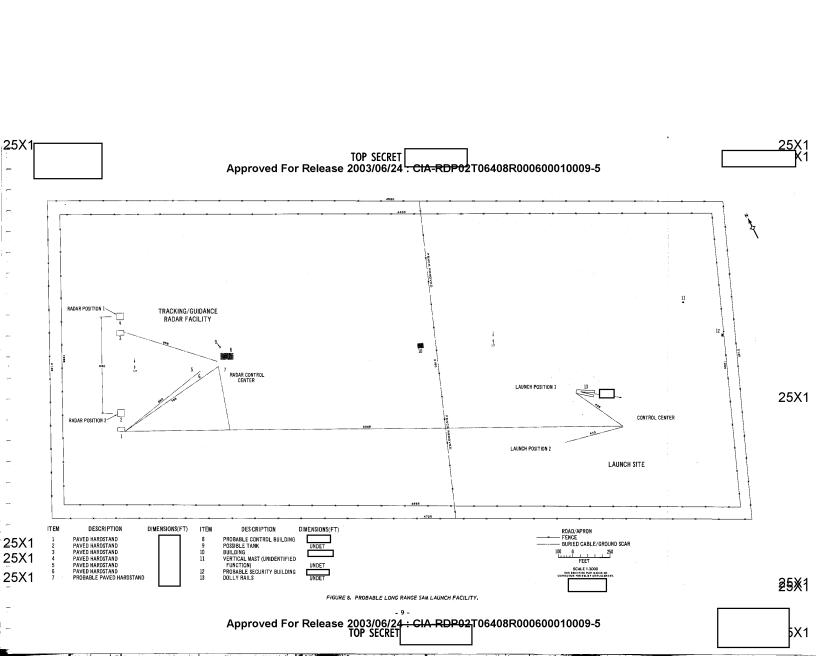
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25X1

FIGURE 7. PROBABLE LONG RANGE SAM LAUNCH FACILITY.

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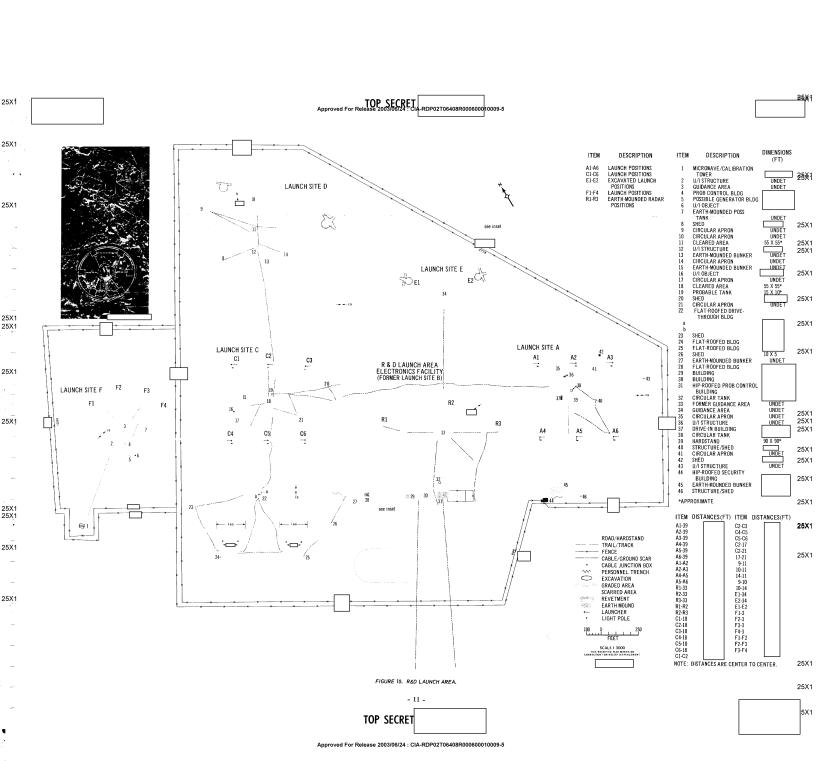


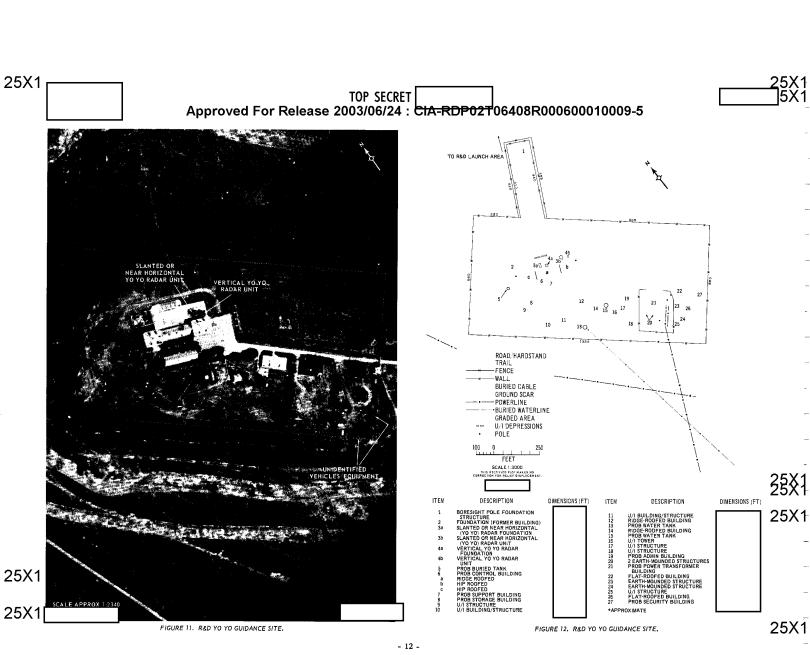
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- 10 -

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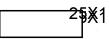


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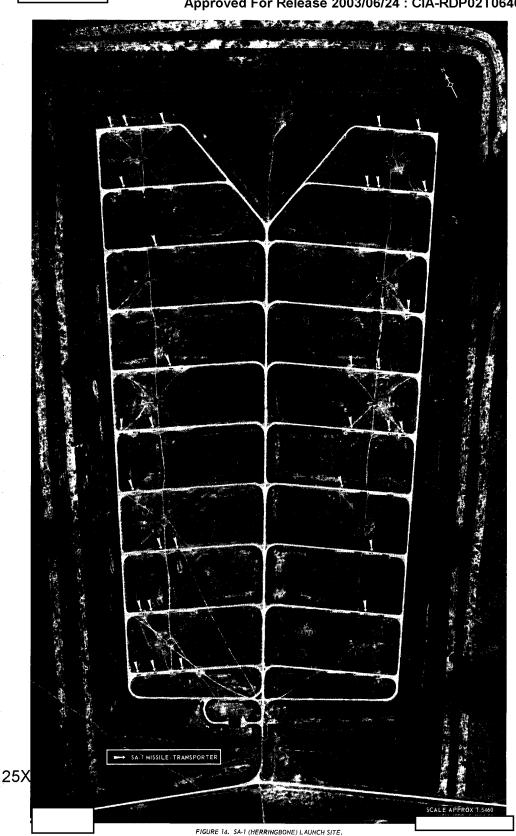
25X1	TOP SECRET Approved For Release 2003/06/24 : CIA-RDP02T06408R00	25X1 00600010009-5 25X1 25X1 25X1
5X1	On a possible earth-mounded tank (item 7) was first observed within the inner-perimeter of the service road. Although the possible tank and several other small structures to the southwest of the site were first observed in they were probably present in they were probably present in the service where the site were first observed in they were probably present in the service of the service road. Although the possible tank and several other small structures to the southwest of the service road. Although the possible tank and several other small structures to the southwest of the service road. Although the possible tank and several other small structures to the southwest of the service road. Although the possible tank and several other small structures to the southwest of the service road. Although the possible tank and several other small structures to the southwest of the service road. Although the possible tank and several other small structures to the southwest of the site were first observed in the service road. Although the possible tank and several other small structures to the southwest of the site were first observed in the service road. Although the possible tank and several other small structures to the southwest of the service road. Although the possible tank and several other small structures to the southwest of the service road. Although the possible tank and several other small structures to the southwest of the service road. Although the possible tank and several other small structures to the southwest of the service road. Although the possible tank and several other small structures to the southwest of the service road.	area was first observed under construction on but was not identifiable until the area has not undergone any detectable changes. (For information regarding missiles and/or missile-related equipment observed at the reverment area see Table 6.)
25X1 25X1 25X1	A microwave/calibration tower (item 1) southwest of Site F was first observed on The presence of ground scarring indicates that the tower could have been in an early stage of construction as early as The tower, approximately is separately secured inside the R & D Launch Area's security perimeter and appears to be cable connected to Structed. Set the connected to	R AND D YO YO GUIDANCE SITE 25X125X25X1 The R and D YO YO Guidance Site for the SA-1 system is approximately 8,600 feet south-southwest of the R and D SA-1 Launch Site segments at approximately 48-47N 45-
25X1	YO YO RADAR ANTENNA 7 14 7	on photography of alarge dumbbell-shaped control building (item 6), a large paved apron which supports a YO YO radar, approximately 15 additional buildings and structures, several tanks, and a power substation. A boresight pole which could be observed on photography of near the small structure (item 1) could not be detected on and the could be observed on the could not be detected on and the could be observed on the could not be detected on and the could be observed on the could not be detected on and the could not be detected on the could not be detected not
_	DIMENSIONS IN FEET PROBABLE	larger scale coverage. Two foundations (items 3a and 4a) on the paved apron adjacent to the probable control building supported a YO YO radar on the first large-scale photographic mission over the site since revealed that the foundations were unoccuried A YO YO radar was possibly assembled, or in a statement assembly, near the eastern end of the paved apron (items
25X1	YO YO RADAR ANTENNAS THOUSELE TO THE PROPERTY OF THE PROPERTY	3b and 4b and Figure 13). However, 3 probable YO YO antennas or their hexagonal-shaped outline can be observed on the snow-covered ground immediately north of the paved apron (Figure 13). On a YO YO radar setup could be confirmed near the eastern end of the paved apron. Although unidentifiable as the YO YO radar on small-scale photography, the eastern end of the paved apron appeared occupied on coverage be-
- 25X1	FIGURE 13. YO YO RADAR ANTENNAS AT R&D YO YO GUIDANCE SITE.	The main powerline, which formerly terminated at this site, now extends from the main Kapustin Yar substation, immediately northwest of the town of Kapustin Yar, to the Precision Tracking Radar Facility. The powerline possibly was extended to the facility around 25X125X25X1
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25X1 ₋ 25X1



ITEM	DESCRIPTION	DIMENSIONS (FT)
1	EARTH-MOUNDED STRUCTURE	25 X 20*
2	10 CONTROL BUNKERS	30 X 25
2	POSSIBLE PAVED AREA	10 X 10
4	EARTH-MOUNDED STRUCTURE	20 X 15*
4 5 6 7	POSSIBLE PAVED AREA	10 X 10
6	EARTH-MOUNDED STRUCTURE	20 X 20*
	EARTH-MOUNDED STRUCTURE	25 X 10*
8	EARTH-MOUNDED STRUCTURE	25 X 10*
9	EARTH-MOUNDED STRUCTURE	15 X 15*
10	EARTH-MOUNDED STRUCTURE	20 X 20*
11	EARTH-MOUNDED STRUCTURE	15 X 15*
12	EARTH-MOUNDED STRUCTURE	20 X 20*
13	EARTH-MOUNDED STRUCTURE	20 X 15*
14	POSSIBLE PAVED AREA	15 X 10
15	EARTH-MOUNDED STRUCTURE	20 X 20*
16	PROBABLE STORAGE BUILDING	
17	DRIVE-THROUGH CHECKOUT BUILDING	85 X 85
18	PROBABLE TANK	
19	PROBABLE BURIED TANK	UNDET
20	PROBABLE SECURITY BUILDING	65 X 35 oa
	*APPROXIMATE	

PERIMETER ROAD 8

CENTERLINE ROAD 7

6

RIB ROAD 5

4

3 2 1 1 2 3 3
2
1

CHECKOUT BUILDING

GUIDANCE AREA

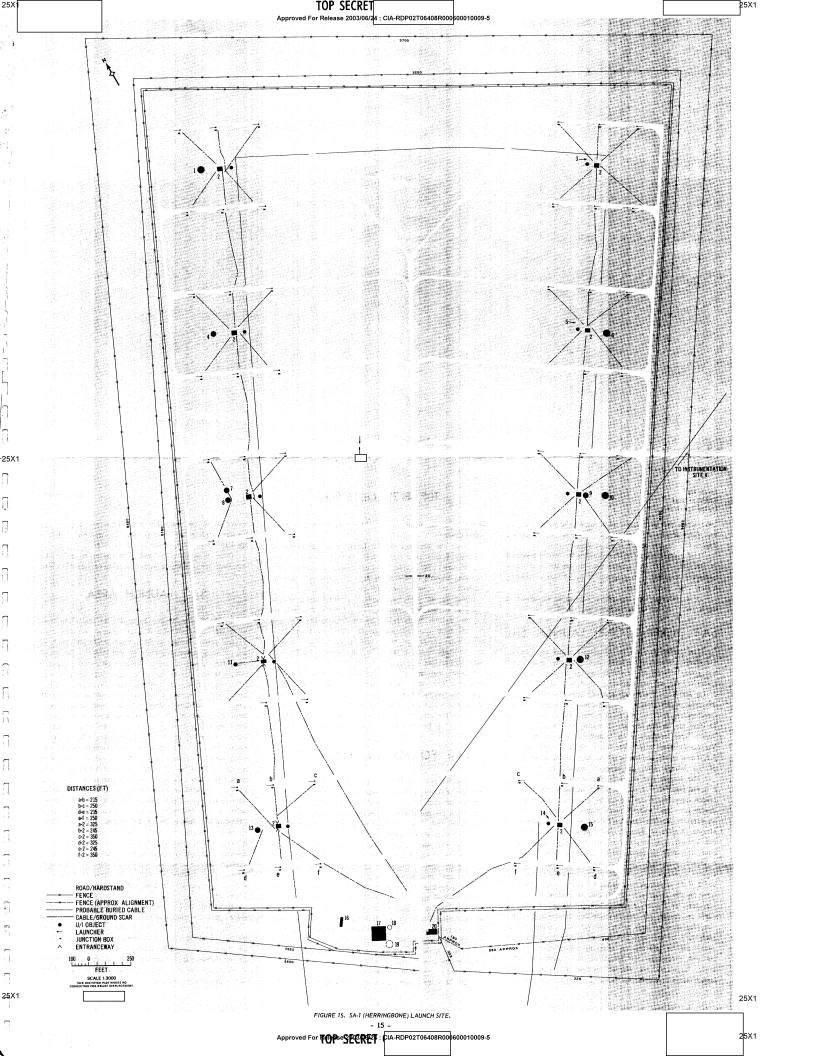
YO YO BUNKER

Using the guidance area as a reference point, the left side of the laurch area is designated A, the right side B, and the roads as follows: the perimeter road; the centerline road; the rib roads, numbered from the rib road nearest the guidance area. Launch positions on rib reads are numbered out from the contentine road. Thus, activity at 3A2 would indicate a position on the third rib road, left side of the launch area, at the second launch position out from the centerline road, as shown in red.

TYPICAL SA-1 SITE

25×1

- 14 -



25X1	when the probable transformer yard at the facility
	was first observed. However, the extension of the power-
25X1	line can be clearly observed on
	The former 80- by 55-foot building/structure reported
	in PIC/JR - 1008/61 1/ has been dismantled and only a
25X1	basement foundation measuring existed by
25X1	item 2, Figure 12).
	(For information regarding equipment observed at
	the R and D YO YO Guidance Site see Table 7.)
	SA-1 (HERRINGBONE) LAUNCH SITE
	The prototype SA-1 (herringbone) launch site is along
	the eastern branch of the SAM Launch Complex main serv-
	ice road between the R and D Launch Area and the SA-2
	Launch Area at approximately 48-47N 45-45E (Figures
	3, 14, and 15). The launch site was first observed on pho-
25X1	tography of and cannot be negated. Since
	development work on the SA-1 system was complete prior
	to 1959, the launch site has served as a training site. The
	launch area consists of a launch site and an associated
	YO YO Guidance Site. The latter, which is approximately
	5,270 feet south-southwest of the first set of launch roads
	of the launch site, is reported separately.
	The launch site consists of a paved perimeter road,

25X1

25X1

25X1

25X1

TOP SECRET probable transformer yard at the facility

a paved centerline road, 20 paved launch or rib roads, 10

launch segments, each served by a control bunker, and 60

launch positions. Each launch segment is constructed in

an explicit geometrical pattern consisting of 6 launch po-

sitions, a control bunker, and a probable cable junction

box immediately adjacent to each launch position. Each control bunker is connected by a buried cable to each of

6 launch positions. Also a buried cable connects the 5 control bunkers on each side of the centerline road. All

but 1 of the segments have at least 1 earth-mounded struc-

ture on the outer side of the control bunker and a small

structure on the inner side. Some of these appear to be cable connected, but their function is undetermined. Cable scarring also extends from the YO YO Guidance Site to each half of the launch site thence continuing through

each half as intermittent scarring which parallels the bunkers throughout the length of the launch site. The launch segments are similar to those found in the SA-1 launch sites that encircle Moskva, except that the control bunkers at the Kapustin Yar SA-1 Launch Site are not earth covered.

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Near the entrance to the launch site and inside the security fences is a large drive-through building (item 17, Figure 15). This building closely resembles the checkout buildings found at the deployed sites that encircle Moskva. Adjacent to the front entrance of the building is a paved apron. On the southern side of the apron is a probable buried tank (item 19). On the northern side is an exposed cylindrical tank-like structure (item 18) observed for the first time on photography of other buildings are in the immediate area. One probably is a storage building (item 16); the other (item 20) is a security building.

Other than the presence of the cylindrical tank-like and an additional structure observed on fenceline, the site has undergone no apparent construction changes since it was identified. (For information regarding missiles and/or missile-related equipment observed at the SA-1 [herringbone] Launch Site see Table 8.)

SA-1 YO YO GUIDANCE SITE

The SA-1 YO YO Guidance Site (Figures 3, 16, and 17) for the Prototype Herringbone (SA-1) Launch Area is south-southwest of the launch site approximately 5,270 feet from the junction of the nearest pair of launch roads and 9,700 feet from the farthest pair of launch roads at approximately 48-46N 45-44E.

The site was first observed on photography of
and cannot be negated. It consists of a
rectangular-shaped control building (item 6, Figure 17),
an adjacent apron which supports a YO YO radar (present
since 9 buildings and structures, 2
earth-covered structures, a buried tank, a partially buried
bunker, a boresight pole foundation structure, and 2 areas
of excavation. The control building is not earth covered
like the ones at the guidance sites that encircle Moskva.
On no apparent changes were noticed
at the site; however, a feature formerly identified 3/ as a
building under construction in was re-
designated a rectangular-shaped excavation.
By an unidentified structure was ob-

served along the fenceline near the entrance (item 13). A small unidentified building/structure that was visible in was not apparent by

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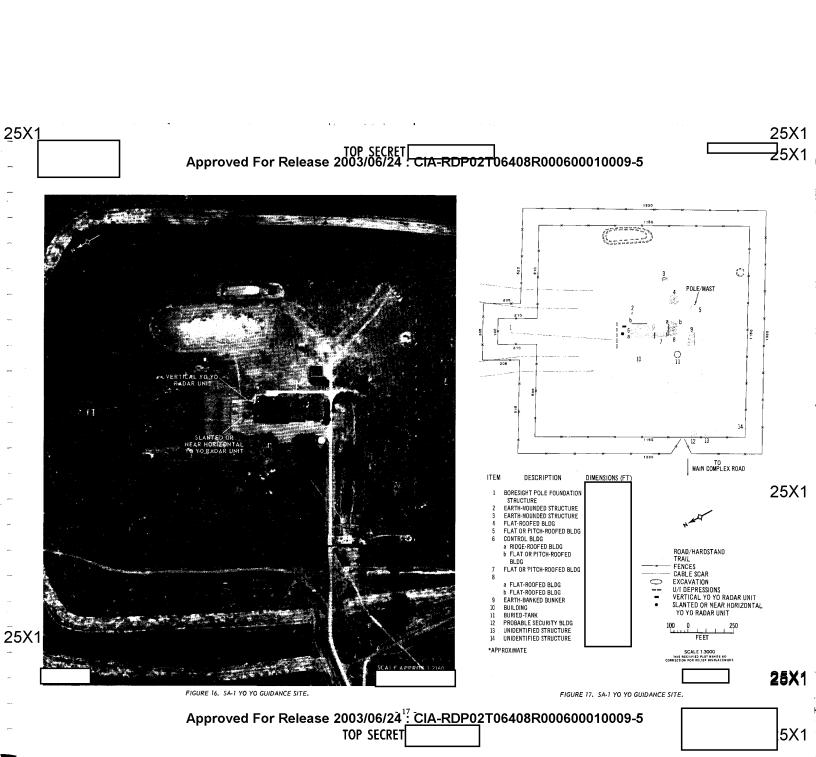
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Other than the YO YO radar, no equipment or vehicles have ever been identified within the secured area of the site.

SA-2 LAUNCH AREA

The SA-2 Launch Area (Figures 3, 18, and 19) is along
the eastern branch of the SAM Launch Complex main
service road between the SA-1 Launch Site and the SA-3
Launch Area at approximately 48-46N 45-46E. The launch
area, first observed under construction on
was not clearly defined as an SA-2 launch area until
the launch area (secured by a
double fence) included 2 completed launch sites, A and B,
along with ancillary sites AA, BB, and launch site E
under construction. Within the fenced launch area are 2
paved aprons (items 9 and 14, Figure 19), a security
building (item 13), and several unidentified buildings/sheds
(items 10-12). Six temporary launch training sites, 3 on
each side of the fenced launch sites mentioned above, were
present and active. 1/ Three of the training sites were
divided into two 3-launcher battery positions. Two sites
were unoccupied and the remaining site had one 3-launcher
battery set up. Each battery consisted of a FAN SONG
radar, 3 SA-2 launchers, and 7 vehicles, making a total of
7 FAN SONG radars, 21 SA-2 launchers, and 49 vehicles
within the training sites. Trackage around and in the area
of the training sites was visible up to
However, no activity was apparent on the small-scale
photographic coverage during the period from
the sites
were no longer visible and had not reappeared through
a rectangular-shaped extension road,
which connects the southern side of the branch road
serving the launch area, was observed. Three paved
aprons are along widened portions of the extension road.
The area is secured by a single fence. A building (item
40) of undetermined function is in the southwest corner
of the fenced area. No equipment has ever been identi-

fied on any of the 3 aprons.



On the first large-scale coverage
of the area since photography, a small power
substation could be observed just south of the launch
area (See Figure 19). An analysis of photography
revealed that the substation probably was present as
early as Although the substation was
not present in an accurate negation can-
not be made on small-scale photography. A powerline
connects the substation with the main powerline that
parallels the western side of the main SAM launch com-
plex service road. (For the SA-2 Launch Area, all item
designators without a referenced figure number are shown
in Figure 19.)
,
LAUNCH SITE A
(C) 1 (T) (T) (10) 11-1 1 - (C-1 1 1 - 1

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This site (Figure 19), which has a fan-shaped road configuration, consists of 4 revetted and 2 unrevetted launch positions and an elliptical-shaped revetted guidance area. A hip-roofed building (item 22) and a probable water tank (item 21) along with a small possible generator building (item 23) are just to the rear of the guidance This latter building appears to be connected to the hip-roofed building by a buried cable. A small unidentifiable structure is adjacent to the possible generator building. To the rear of the hip-roofed building and across the service road are a flat-roofed building (item 25) and 2 small buildings/structures (items 26 and 27) one of which might function as a possible generator building for the flat-roofed building. Cable/ground scars lead from the flat-roofed building toward both the hiproofed building (item 22) and the probable security building (item 13) near the entrance of the SA-2 Launch Area.

٠.	,	
The	launch site could be observed under construc	ction
on	. However, it was not until	
	that the actual configuration could be obser	ved.
At that	time the launch site appeared complete.	The
flat-roo	fed building was absent in	and
appeare	d sometime between	
Ground	scarring could be observed in and	d the
presenc	e of the building could be confirmed by	
	there has been no appa	rent
structur	al change since the addition of the flat-ro	ofed
building	in	

(For information regarding missiles and/or missile-

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related equipment observed at Launch Site A see Table 9.)

LAUNCH SITE AA

This ancillary site (Figure 19), which appears as a loop-road extension off Launch Site A, consists of 2 paved unrevetted launch positions, a paved unrevetted apron used as the guidance area, a building (item 32), and 3 unidentifiable buildings/structures. Buried cables extend from the paved apron to each of the 2 launch positions.

The site was first observed under construction on Only the loop-road and building were under construction at this date. The remainder of the launch site probably was complete by the time of the next photographic coverage in the site could be confirmed as being complete. Through there has been no apparent structural change since its confirmed completion date. (For information regarding missiles and/or missile-related equipment observed at Launch Site AA see Table 10.)

LAUNCH SITE B

This site (Figure 19), which has a semicircular fanshaped road configuration, consists of 3 revetted and 3 unrevetted launch positions, a hip-roofed building (item 7), a probable water tank (item 8), and a small possible generator building (item 6), which appears to be connected to the hip-roofed building by a buried cable. The guidance area for the site is along a paved road which joins the 2 end launch positions. Earth excavations paralleling both sides of this road on [appear to have been filled by Cable/ ground scars extend from the guidance area to the hiproofed building.

This site was first observed under construction on but could not be clearly observed until Since then the site has undergone no apparent structural change through (For information regarding missiles and/or missile-related equipment observed at Launch Site B see Table 11.)

LAUNCH SITE BB

This ancillary site (Figure 19), which appears as a loop-road extension off Launch Site B, consists of 2 paved unrevetted launch positions, a paved unrevetted apron that can be utilized as the guidance area, a building (item 4), and 2 unidentified structures. Paved roads or pathways extend from the paved apron to each of the 2 launch positions.

The site was first observed under construction on			
At that time the launch positions, the			
aved apron, and the building were under construction.			
he site, as it exists on photography of was			
robably complete when seen on photographic coverage			
f However, by a firm			
ompletion date was established. (For information re-			
garding missiles and/or missile-related equipment ob-			
served at Launch Site BB see Table 12.)			

LAUNCH SITE C

This site (Figure 19) consists of 4 unrevetted, paved launch positions along the inside of a paved semicircular perimeter service road, an unrevetted apron which serves as the site's guidance area, a flat-roofed building (item 35), a possible buried tank (item 36), and 4 small buildings/ structures. One of the small buildings/structures (item 38) may serve as a generator building for the flat-roofed building. Buried cables extend from the guidance area toward

each of the launch pos	itions.		
This site could f	first be observe	ed in a proba	able stage
of construction on		Although r	o activity
could be observed on	1	the site was	probably
complete or in a ver	y late stage of	construction.	Through
no appar	ent structural	change has	occurred
since			

(For information regarding missiles and/or missilerelated equipment observed at Launch Site C see Table 13.)

LAUNCH SITE D

LACITOTIC D	
This site (Figure 19), which appeared similar in size	z
and configuration to Launch Site C, was first observe	e
under construction on ti	h
site remained unchanged, giving the appearance that either	e:
the site was only a temporary field site or that construction	0
had been discontinued. By the site ha	a
deteriorated and was overgrown by vegetation. No activi	t
was ever apparent on the small-scale photographic coverag	g
of this site.	

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LAUNCH SITE E This site (Figure 19), consists of 3 paved unrevetted

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launch positions and a paved unrevetted apron used as the guidance area. Immediately to the rear of the guidance area is a large hip-roofed building with a dormer on each end (item 15) and 2 smaller buildings (items 16 and 17). Probable buried cables extend from the guidance area toward the launch positions. Additional cable/ground scars can be observed within the area of the site.

This site was first observed under construction on at which time only the 2 roads leading from Site A to B, along with an unpaved outline of the hardstand, could be observed. The 3 buildings to the rear of the hardstand were present. The 2 smaller buildings probably are directly associated with Launch Site E, while the larger hip-roofed building is utilized as a central control building for the area.

light tonal areas could be observed By on the small-scale photography at the location of the 3 launch positions and the hardstand. At that time the launch positions and hardstand could have been under construction, but probably were complete. Through has been no apparent structural change at the site since its probable completion. (For information regarding missiles and/or missile-related equipment observed at Launch Site E see Table 14.)

SA-3 LAUNCH AREA

The SA-3 Launch Area (Figures 3, 20, and 21) is at the terminus of the eastern branch of the SAM Launch Complex main service road, at approximately 48-47N

The launch area, which was probably used in developing the SA-3 system, consists of 4 launch sites (A - D), 1 paved and 4 earth-graded parking aprons to the rear of Launch Site B, and 3 earth-covered bunkers west of Site B. An instrumentation/control site, which appears to be cable-connected to possibly 2 of the launch sites, is directly south of the launch area. This site will be discussed in a later report concerning the Kapustin Yar SAM instrumentation sites.

the single-fenced SA-3 Launch On Area was first observed and consisted of Launch Sites

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A and B, a ridge-roofed security building (item 17, Figure 21), and a rectangular-shaped paved road with a paved apron at the southwest corner. Within the area encompassed by the paved road is a circular buried tank (item 16) and a small building (item 15).

Bv the launch area had expanded to its present-day size with the probable completion of 2 new launch sites, C and D, the 3 earth-covered bunkers west of Launch Site B, and the 4 earth-graded parking aprons. The 2 new launch sites are served by a separate road extending from the branch road and are enclosed by a double fence with a probable security building (item 22) at the entranceway.

(For the SA-3 Launch Area all item designators without a referenced figure number are in Figure 21.)

LAUNCH SITE A

This site (Figure 21) consists of 4 revetted launch positions arranged in a trapezoidal configuration around a large, paved, circular-revetted guidance area. Each launch position is served by a paved T-shaped service road. The revetted launch positions are at 1 end of the "T" bar, leaving the other end of the bar open for the missile transporter to position itself prior to backing into the position for unloading its missiles. Adjacent to the revetted guidance area is a large hip-roofed building (item 26) which probably is utilized as the site control building. Immediately west of the building is a circular tank (item 24). To the rear of the building is a paved apron which probably is used as a missile-hold position. Photography of revealed 2 possible buried tanks at this location. However, no evidence of their presence is observed on large-scale coverage of the area A path/ground scar leads from the paved apron to a small unidentified

structure (item 25).
The site was first observed under construction on
and can be negated on photography of
Construction in was nearly com
plete, but some work was still in progress on the road
and the hip-roofed building. Although the site was prob
ably complete by the time of the first coverage
on it can be considered externally com
plete by Since that date there has bee

no apparent structural change through

(For information regarding missiles and/or missilerelated equipment observed at Launch Site A see Table 15.)

LAUNCH SITE B

This site (Figure 21) is the prototype B-configuration SA-3 launch site. The road configuration consists of a semicircular paved service road with 1 revetted and 3 unrevetted launch positions arranged in a sawtooth pattern outside the service road and connected to it by short access roads. A revetted guidance area is in the approximate center of the site. In the center of the guidance area is a tower (item 5) which was first observed on

and can be negated on photography of A hip-roofed building (item 8) probably utilized as a control building, and 2 smaller buildings/structures are immediately to the rear of the site. A small, cylindrical, tank-like structure (item 9) is behind the site and to the

east of the hip-roofed building.			
The site was first observed in and can			
be negated in In 1959 the site appeared			
functional and basically complete except for the guidance			
area and the 1 revetted launch position which were not yet			
revetted. Also the cylindrical tank-like structure and the			
tower (first observed in were absent.			
The guidance area revetment could be observed on			
but the 1 launch position revetment and cylindrical			
tank-like structure could not be accurately confirmed			
until large-scale coverage of			
Except for the erection of the tower between			
and the guidance area revetment con-			
struction observed in the site has not undergone			

any significant structural change through (For information regarding missiles and/or missile-

related equipment observed at Launch Site B see Table 16.)

LAUNCH SITE C

This site is similar in appearance to Site B, except that the access roads are arranged in the opposite direction (Figure 21). The road configuration consists of a semicircular paved service road with 4 paved unrevetted launch positions arranged in a sawtooth pattern outside the service road and connected to it by short access roads. A revetted guidance area is in the approximate radial center of the

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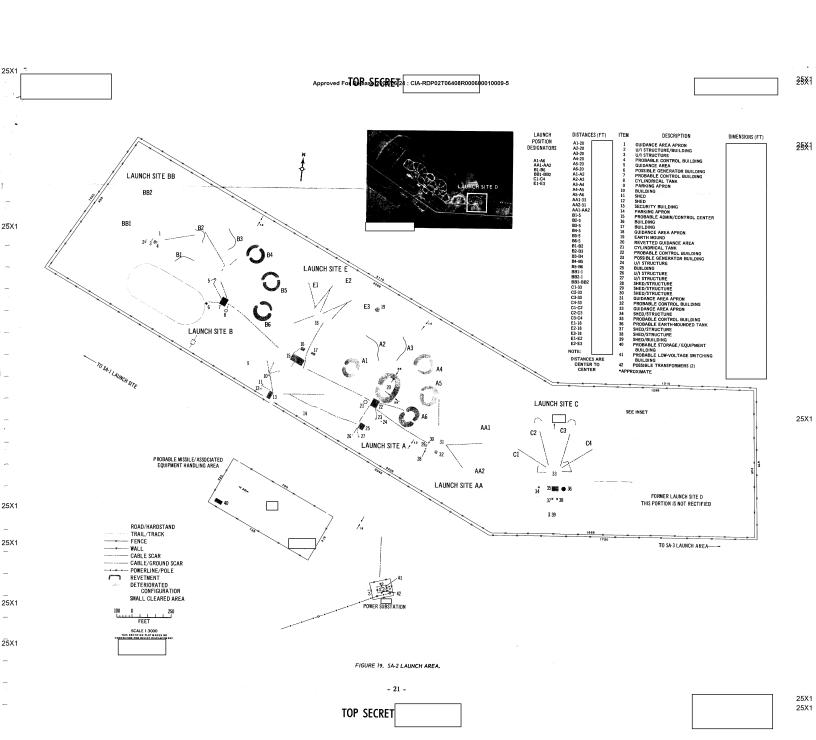
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FIGURE 18. SA-2 LAUNCH AREA.

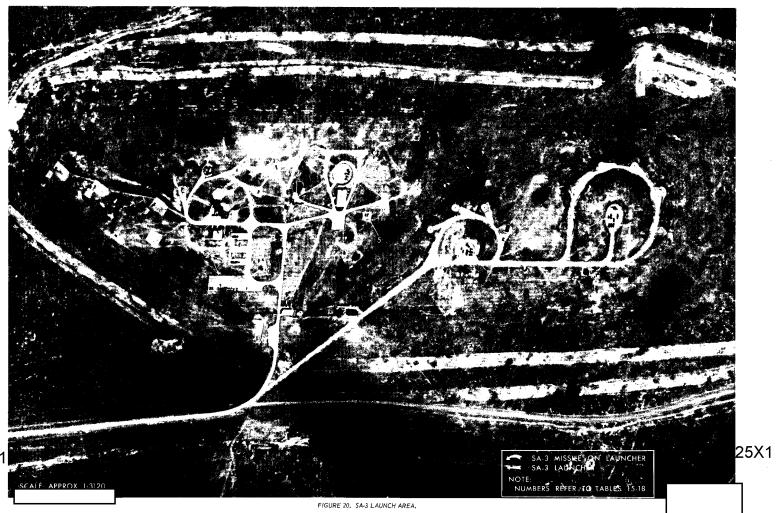
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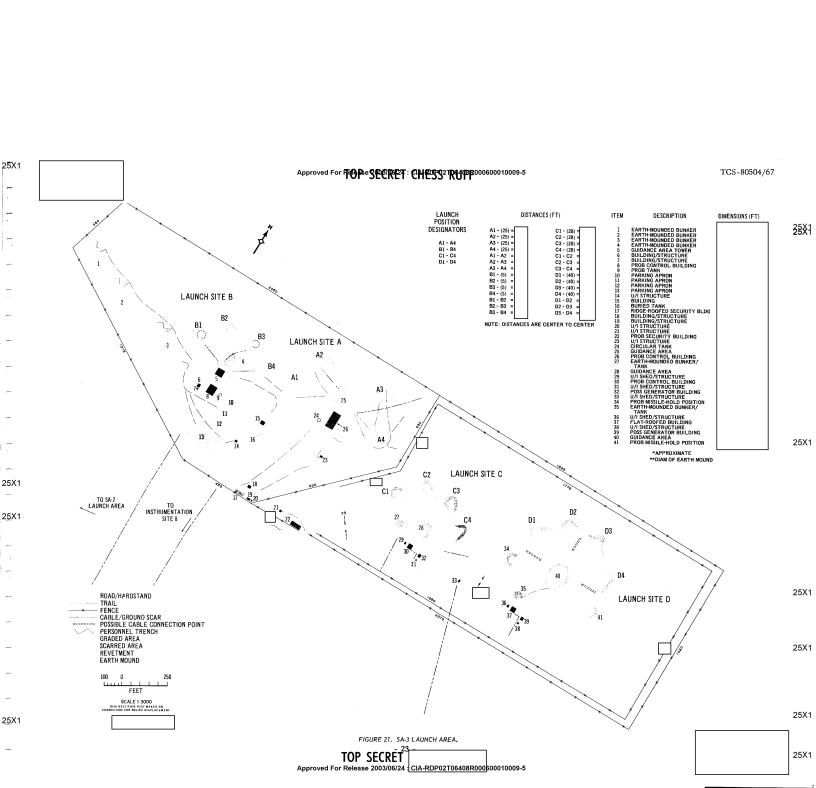
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site. Adjacent to the guidance area is an earth-mounded bunker/tank (item 27). To the rear of the guidance area are a flat-roofed probable control building (item 30), a possible generator building (item 32), and 2 small uniden-

Scarring was first observed in the area of the site on a faintly discernible semicircular configuration could be observed in the area of the launch site. The site could have been completed by this date but weather conditions severely limited the interpretability of the entire site. Although no activity was observed, the site appeared structurally complete on the Since that next coverage of the area on date, no apparent structural change has occurred at the site through

(For information regarding missiles and/or missilerelated equipment observed at Launch Site C see Table 17).

LAUNCH SITE D

tified sheds/structures.

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This site (Figure 21) consists of 4 paved unrevetted launch positions and 2 earth-graded probable missile-hold positions arranged along the outside of an approximately circular paved service road. A slightly revetted paved guidance area is in the approximate center of the site and is connected to the service road by a paved access road. Within the southwest quadrant of the site and adjacent to the service road is an earth-mounded bunker/tank (item 35). Across the service road and opposite the earth mound is a flat-roofed building (item 37) similar in size to the building at Launch Site C. To the east of this building is a possible generator building (item 39). Two small unidentified sheds/structures are in the vicinity of the 2 larger buildings.

Construction of the site service road was first observed on photography of a faintly discernible outline of the site configuration was observed. The site may have been complete or in a late stage of construction by then, but weather conditions severely limited the interpretability of the entire site. Although no activity was apparent, the site appeared complete on the next coverage of the area on Since then no apparent structural change has occurred at the site through (For information regarding missiles and/or missile-related equipment observed at Launch Site D see Table 18.)

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SAM TRAINING SITE A

SAM Training Site A is 16 nm north-northwest of Kapustin Yar at approximately 48-49N 45-38E (Figures 1, 22, and 23). The site is served by trails or unimproved roads. The configuration of the site consists of 6 earthgraded positions, 2 of which may be utilized as missile hold positions, arranged along the periphery of a nearly circular paved or well improved service road. A possibly paved revetted guidance area is in the approximate center of the site and is connected to the service road by an access road. This site is similar in size and shape to Launch Site D at the SA-3 Launch Area, which was first observed under construction on Training Site A was first observed under construction

The scarred area to the north of the site on along with the centrally located guidance area and the nearly circular service road were present. [the guidance area was revetted and construction of the large support building (item 8, Figure 23) along with earth scarring in the area of the later identified fence line was visible. Three launch positions and I missile hold position were also discernible along the periphery of the service road. of the service road. four launch and 2 missile hold positions were present. Although poor quality and small-scale of photography did not permit identification of equipment, the guidance area appeared

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(For information regarding missiles and/or missilerelated equipment observed at SAM Training Site A see Table 19.)

SAM TRAINING SITE B

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SAM Training Site B is 17.5 nm northwest of Kapustin Yar at approximately 48-49N 45-30E (Figures 1, 24, and The site is served by trails or unimproved roads. The configuration of the site is similar in most respects to the configuration of Training Site A. In the southeast quadrant of the site's secured area are 2 long rectangularshaped buildings (items 5 and 6, Figure 25), a shed, and an unidentified structure. A revetment (item 3) is immediately west of the site access road. A small unidentified object is within the revetment.

Training Site B was first observed under construc-
tion on Only the service road and 3 possible
launch positions were discernible. The site can be ne-
gated on the guidance
area and 2 support buildings were visible. By
all of the launch positions were visible. Although
the site did not appear occupied in it prob-
ably was complete or in a very late stage of construction.
However, by the guidance area appeared
occupied, but the occupancy of the launch positions could
not be determined because of poor quality and small-
scale of photography.
the rectangular-chaned earth coarr-

ing inside the site service road and the large scarred area (probably used as a sports area) near the entrance. but outside the fenced area, were visible.

The only large-scale photographic coverage of the site was on At that time the launch positions appeared unoccupied and somewhat deteriorated by the presence of ground vegetation. However, the guidance area was occupied by a probable FAN SONG radar and 9 electronic-associated vans. No additional vehicles or equipment were observed within the training site.

Since the ground scarring on struction work or change in structures at the site had taken place through

SAM TRAINING SITE C

SAM Training Site C is 21.5 nm west-northwest of Kapustin Yar at approximately 48-45N 45-16E (Figures 1 and 26). The site is similar, if not identical, to SAM Training Sites A and B. The site is served by trails or

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- 25

Approved For RTOP: SESCREAT: CIA-RDP02T06408R000600010009-5 B1 B4 ROAD/HARDSTAND - FENCE DETERIORATED POSITION SCARRED AREA DISTANCES (FT) B1-4 270
B2-4 270
B3-4 295
B4-4 295
B5-4 270
B1-82 180
B2-B3 205
B3-B4 195
B4-B5 195
B5-B6 220
NOTE: DISTANCES ARE CENTER TO CENTER DIMENSIONS (FT) ITEM DESCRIPTION BASE OF EXCAVATION U/I OBJECT REVETTED TO REVETTED GUIDANCE AREA SUPPORT BUILDING SUPPORT BUILDING SHED U/I STRUCTURE FIGURE 24. SAM TRAINING SITE B. FIGURE 25. SAM TRAINING SITE B.

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unimproved roads and is enclosed by a fence. At least 4 earth-graded launch positions and 2 possible hold positions can be observed along the periphery of a nearly circular earth-graded service road. An unrevetted earth-graded or possibly paved guidance area is in the approximate center of the site.

Training Site C, which can be negated on was first observed under construction on At that time it consisted of a service road and 2 possible buildings. The site was not clearly discernible on photography again until when it was occupied by equipment in the guidance area. Three buildings were visible in the southeast quadrant of the site area, two of which compare in size and location to the 2 large support buildings at SAM Training Site B. The third building is much smaller.

Details are limited at Training Site C, since it has been covered only by photography. However, between there were no apparent structural changes observed at the site.

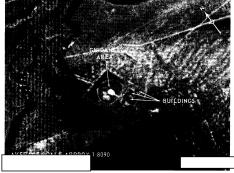


FIGURE 26. SAM TRAINING SITE C.

CHRONOLOGIES OF ACTIVITY

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MISSION AND DATE

ACTIVITY

Table 1. R&D Launch Area, Launch Site A**

Six permanently emplaced SA-1 erector/launchers; one occupied by a u/i covered missile. Three u/i vehicles/pieces of equipment on one of the circular aprons. Several u/i objects on the 90-foot-square hardstand.

Six permanently emplaced SA-1 erector/launchers (unoccupied); several u/i objects on the 90-foot-square hardstand.

Because of clouds only 4 of the 6 permanently emplaced SA-1 erector/launchers can be observed and they appear to be unoccupied; 1 u/i vehicle/ piece of equipment on the northernmost launch road; the 90-foot-square hardstand appears to be

Six unoccupied permanently emplaced SA-1 erector/ launchers; 1 probable cargo-type vehicle and 2 small vehicles on the service road; the 90-foot-square hardstand is unoccupied.

Six permanently emplaced SA-1 erector/launchers (unoccupied); no vehicles or equipment observed.

Table 2. R&D Launch Area Electronic Facility** (Former Launch Site B)

Each of the 6 launch positions occupied by an SA-2 launcher. Two, possibly 3, of the launchers oc-cupied by GUIDELINE missiles. Central guidance area occupied by a FAN SONG guidance radar unit consisting of 4 probable electronic-associated consisting of 4 probable electronic-associated vans, 3 u/i vehicles, 2 probable generator vans, 4 u/i pieces of equipment, and a FAN SONG radar. A FAN SONG radar. 4 probable electronic-associated vans, and 1 u/i vehicle are on the hardstand adjacent to the probable control building. Within the Site B area are 4 scorpion-type launchers, 2 occupied by GUIDELINE missiles.

Radar position R1, occupied by a probable range-Radar position R1, occupied by a probable range-and azimuth-type radar; radar position R2, unoc-cupied; radar position R3, occupied by a probable height finder-type radar; former launch site guid-ance area occupied by a probable LOW BLOW guidance radar and 10 pieces of support equipment (primarily electronic-associated vans and van trucks). Three probable electronic-associated vans are on a former launch position near radar position R1, and 2 on the position near radar position R1, and 2 on the position near radar po-sition R3. At least 10 vehicles/pieces of equip-ment are parked on the hardstand adjacent to the probable control building, south of the former launch site.

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CHRONOLOGIES OF ACTIVITY

MISSION AND DATE

ACTIVITY

Table 2. R&D Launch Area Electronic Facility (Former Launch Site B) (Continued)

Radar position R1, occupied by a probable BAR LOCK radar; 5 vehicles/pieces of equipment on former launch position near radar position R1; radar position R2, unoccupied; former launch site guidance area occupied by a probable LOW BLOW guidance radar and 5 vehicles/pieces of equipment; at least 12 vehicles/pieces of equipment. ment are on the hardstand adjacent to the prob-able control building. The remainder of the facility is cloud covered

Radar position R1, occupied by a BAR LOCK radar; 4 probable electronic-associated vans on the form-4 probable electronic-associated vans on the former launch position near radar position R1 and 2 vehicles/vans on the perimeter road adjoining the former launch position R2, unoccupied; former launch site guidance area occupied by a LOW BLOW guidance radar and 5 vehicles/pieces of equipment (photo annotation 8); radar position R3, occupied by a probable STONE CAKE radar; 2 probable vans are on the former launch position near radar position R3 (photo annotation 8). Two van trucks and 2 possible generator vans are at the intersection of the perimeter road and the service road that enters the perimeter road and the service road that enters from the east (photo annotation 10). Nine vans, 2 cargo-type trucks and 1 u/i vehicle/piece of equipment are on the hardstand adjacent to the probable control building, south of the former launch site (photo annotation 11).

Except for the absence of the 2 cargo-type trucks on the hardstand and the addition of 1 probable elec-tronic-associated van at the former launch site guidance area, the activity at the facility appears the ame as seen on

Table 3. R&D Launch Area, Launch Site C**

Three probable missile transporters on the launch roads; 6 permanently emplaced SA-1 erector/ launchers, unoccupied. An u/i vehicle/piece of equipment (photo annotation 6) on 1 of the circular aprons; 6 permanently emplaced SA-1 erector/launchers, unoccupied. No apparent change sinc No apparent change since No apparent change since

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Table 4. R&D Launch Area, Launch Site D**

Three vehicles/vans and 1 u/i object are on a circular apron (item 9); I u/i possible missile is on a circular apron (item 10); and 2 u/i objects are on the triangular-shaped parking apron adjacent to a third circular apron (item 14).

No activity observed

No activity observed; part of the site is obscured by

One u/i object is on the 55-foot-square area (item 11)

No activity observed.

Table 5. R&D Launch Area, Launch Site F*

The guidance area is occupied by 1 probable LOW BLOW radar and at least 3 probable vans; 2 of the 4 launch positions have probable vans parked on their respective access roads, 2 at Position F1 and 4 at Position F2.

The guidance area is occupied by 12 probable electronic-associated vans, 1 probable LOW BLOW radar and 1 possible FAN SOMG radar. Two probable electronic-associated vans are parked on the access road entering Launch Position F1.

The guidance area is occupied by 12 probable electronic-associated vans, 1 probable LOW BLOW radar and 1 probable FAN SONG radar. Three vans are parked on the service road and 2 possible electronic-associated vans are parked on the access road entering Launch Position F1.

The guidance area (photo annotation 1) remains occupied by 12 probable electronic-associated vans, 1 probable LOW BLOW radar and 1 probable FAN SONG radar, possibly a B/C type; 3 vans remain parked on the service road (photo annotation 2). Three of the launch positions are occupied; Launch Position F1 has 1 van parked on its access road and 2 probable vans in the launch position; Launch and 2 probable vans in the launch position; Launch Position F2 has 3 vans parked in the launch position and 5 probable vehicles/vans on the position access road; Launch Position F3 has 2 vans on its access road. Two probable electronic-associated vans/van trucks are parked approximately 300 feet south of the guidance area (photo annotation 3). tion 3).

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Table 6. R&D Launch Area, Revetment Area*

At least 12 u/i pieces of equipment are in the 2

Six probable GUILD missiles on semitrailers; 6 u/i suspect missiles probably on dollies; at least 6 sets of bogie wheels; and at least 15 u/i pieces of equipment.

Five probable GUILD missiles on semitrailers; to possible GUIDELINE missiles on dollies; at least 6 sets of bogie wheels; and at least 15 u/i pieces of equipment and 1 possible

Eight probable GUILD missiles on semitrailers: 6 probable GUIDELINE missiles on dollies: 10 u/i pieces of equipment; and at least 5 sets of bogie wheels and 1 possible vehicle (photo annotations 4 & 5).

Table 7. R&D YO YO Guidance Site **

No activity observed.

Approximately 15 u/i vehicles/pieces of equipment served in the southeast corner of the site

Cloud cover over the southeast corner of the site No vehicles/pieces of equipment observed in the remaining cloud-free portion of the site.

Approximately 21 u/i vehicles/pieces of equipment observed in the southeast corner of the site

Approximately 19 u/i vehicles/pieces of equipment observed in the southeast corner of the site.

Table 8. SA-1 (herringbone) Launch Site**

A total of 28 probable GUIDELINE (SA-2) missiles A GOAL OF 29 PRODUCE CUIDELINE, (SA-2) missines on dollies are observed parked along the perimeter road and the first 2 launch roads to the east of the centerline road. A total of 28 probable GUILD (SA-1) missiles, 25 on erector/launchers, and 3 on transporters, are observed throughout the launch area. Five probable unoccupied transporters are on the launch roads near launch resettiens.

Eleven probable GUILD missiles are on erector/ launchers; 8 probable GUILD missiles are on transporters along the launch roads; and 7 prob-

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Table 8. SA-1 (herringbone) Launch Site (Continued)

able transporters, occupancy undetermined, are along the launch roads.

Approximately 75 percent of the launch site is cloud covered. The open portion reveals the presence of 5 GUILD missiles on erector/ launchers, 10 GUILD missiles on transporters near the launch positions, and 3 transporters, probably occupied, near the checkout building

Ten GUILD missiles are on erector/launchers; 15 GUILD missiles are on transporters; 13 SA-1 transporters, possibly occupied, and 3 unoccupied transporters are along the launch

Twelve GUILD missiles are on erector/launchers; 11 GUILD missiles are on transporters; I SA-1 transporter, possibly occupied and 7 unoccupied SA-1 transporters are along the launch roads. Two vehicles/pieces of equipment are near the checkout building.

Table 9. SA-2 Launch Area, Launch Site A**

There is no activity at the site. However, adjacent and to the rear of the site within the fenced area are 8 missile transporters and 2 vans on a paved parking apron (item 14, Figure 19).

Three launch positions are occupied by probable SA-2 launchers. The guidance area is occupied by a FAN SONG radar (probably of the B-C type) and 6 electronic-associated vans. At least 10 probable missile transporters (occupancy unde-termined) and 7 u/i vehicles/pieces of equipment are on the paved parking apron adjacent and to the rear of the site.

Site is cloud covered.

Two launch positions are occupied (1 by a GUIDE-LINE missile). The guidance area is occupied by a FAN SONG radar and 11 electronic-associated vans. Three missile transporters, probably occupied, are on 1 of the inner service roads. Eleven missile transporters, 10 occupied by GUIDELINE missiles and 1 unoccupied, are parked on the paved parking apron adjacent and to the rear of the site.

Three launch positions are occupied (1 by a probable GUIDELINE missile). The guidance area is occupied by a FAN SOM radar and 11 electronic-associated vans (photo annotation 5). Five missile transporters and a cargo-type vehicle with an attached generator van are located on

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Table 9. SA-2 Launch Area, Launch Site A (Continued)

1 of the inner service roads (photo annotation 6). Ten missile transporter semitrailers are on the paved parking apron adjacent and to the rear of the site (photo annotation 7). Five of the semitrailers are occupied by GUIDELINE missiles

Table 10. SA-2 Launch Area, Launch Site AA**

No activity (the site was not complete by this date).

several u/i vehicles/pieces of equipment are ob-served on the paved apron used as a guidance area for the site.

Site cloud covered.

One of the 2 launch positions is occupied by a probable SA-2 launcher. The guidance area is occupied by 2 FAN SONG radars and 13 electronic-associated vans.

One u/i vehicle/van is observed on the road entering the guidance area (photo annotation 8).

Table 11. SA-2 Launch Area, Launch Site B**

There is no activity at the site. However, adjacent and to the rear of the site, within the fenced area, are 4 missile transporters and a van on a paved parking apron (item 9, Figure 19).

Four launch positions are occupied by SA-2 launchers. The guidance area is occupied by a probable FAN SONG radar and at least 7 probable electronic asso-SONG radar and at least 7 probable electronic-associated vans. A possible FAN SONG radar and 6 probable vans are at the eastern end of the road which passes through the guidance area. Eight w/i vehicles/pieces of equipment and 4 probable vans are on the paved parking apron adjacent and to the rear of the site.

Because of cloud cover only 1 launch position (oc-cupied by an SA-2 launcher) can be observed. At least 3 sets of bogie wheels and 6 u/i vehicles/ pieces of equipment are on the paved parking apron adjacent and to the rear of the site.

Three launch positions are occupied by SA-2 launchers. Two of the launchers are occupied by GUIDELINE missiles. The guidance area is occupied by a FAN SONG radar and 7 electronic-associated vans. At least 3 sets of bogic wheels and 7 u/i vehicles/pieces of equipment are on the paved parking apron adjacent and to the rear of the site.

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Table 11. SA-2 Launch Area, Launch Site B (Continued)

Three launch positions are occupied by SA-2 launchtree aunon positions are occupied by GN2 haunon-ers. Two launchers are occupied by GUIDELINE missiles. One probable FAN SONG radar and 7 probable electronic-associated vans are observed in the guidance area (photo annotation 2). The paved parking apron adjacent and to the rear of the site supports 1 probable canvas-covered missile transporter, 3 sets of bogie wheels and 7 w/i vehicles/pieces of equipment (photo annotation 3).

Table 12. SA-2 Launch Area, Launch Site BB**

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No activity (the site was not complete by this date).

Three u/i vehicles/pieces of equipment are observed on the paved apron used as the probable guidance area for the site. One launch position is occupied by a probable SA-2 launcher.

The paved apron is occupied by 2 probable canvas-covered missile transporters (occupancy undeter-

The paved apron is occupied by 3 probable canvascovered missile transporters (occupancy undeter-

Three probable canvas-covered missile transporters are on or near the paved apron (occupancy undetermined) (photo annotation 1).

Table 13. SA-2 Launch Area, Launch Site C*



Site cloud covered.

No activity.

Two of the 4 occupied launch positions have GUIDE-LINE missiles. The guidance area is occupied by 2 FAN SONG radars and 8 electronic-associated

Three launch positions are occupied by SA-2 launchers. The guidance area is occupied by a possible FAN SONG radar and 6 electronic-associated vans

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Table 14. SA-2 Launch Area, Launch Site E**

No activity at the site. The area at this time of coverage was not recognized as a site and ap-peared only as a road link between Launch Sites A and B.

One of the 3 launch positions is occupied by a probable SA-2 launcher. Two probable SA-2 launchers are at 2 of the site's road intersections. A possible FAN SONG radar and at least 8 probable electronic-associated vans are in the guid-

Site cloud covered.

One of the 3 launch positions is occupied by a probable GUIDELINE missile on a launcher. Two probable GUIDELINE missiles on launchers are near the intersection of the site's service road and the road leading to the guidance area. A probable FAN SONG radar and at least 10 probable electronic-associated vans are in the guidance area.

Two of the launch positions are occupied, (1 by a probable GUIDELINE missile). Two probable SA-2 launchers are positioned near the guidance area. The guidance area is occupied by a FAN SONG radar and 10 electronic-associated vans (photo annotation 4).

Table 15. SA-3 Launch Area, Launch Site A**

Construction activity only is apparent at this date.

Three of the 4 launch positions are occupied by probable SA-3 launchers. The guidance area is occupied by a probable LOW BLOW radar and at least 4 probable electronic-associated vans.

Three of the 4 launch positions are visible and oc-cupied by probable SA-3 launchers. The guidance area is occupied by at least 4 electronic-associated vans. The remainder of the site is cloud covered.

Two of the 4 launch positions are occupied by SA-3 launchers. One launcher is probably occupied by 2 GOA missiles. The guidance area is occupied by a probable LOW BLOW radar and 3 electronic-associated vans. One possible SA-3 transporter and 2 probable electronic-associated type vans are to the rear of the guidance area.

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Table 15. SA-3 Launch Area, Launch Site A (Continued)



Two of the 4 launch positions are occupied, 1 with Two of the 4 launch positions are occupied, I with probable GOA missiles on a launcher and 1 canvas-covered launcher. At least 3 vans and 4 vehicles/pieces of equipment are parked near a third launch position (photo annotation 3). The guidance area is occupied by a probable LOW BLOW radar, and 3 electronic-associated vans (photo annotation 4). Two probable electronic-associated vans are parked to the rear of the site (photo annotation 5).

Table 16. SA-3 Launch Area, Launch Site B**

All 4 launch positions are occupied with some type of equipment. One of the positions is occupied by 2 missile-like objects on a possible launcher. Two of the positions have what could be canvascovered missile launchers. The fourth position has an unidentified van/piece of equipment parked on it. The midness can be a second to expend the control of the part of the control of the on it. The guidance area apron is occupied by a possible radar (unidentified) and at least 3 possible vans. To the rear of the site are 6 unidentified vehicles/pieces of equipment on the paved parking

Three of the 4 launch positions are occupied with probable SA-8 launchers. The tower in the guidance area is occupied by a probable LOW BLOW radar. Approximately 20 vehicles/pieces of equipment and 1 possible LOW BLOW radar are on the 1 paved and 4 earth-graded parking aprons to the rear of the site.

Site and parking aprons cloud covered.

Two, and possibly 3 launch positions are occupied by SA-3 launchers. One of the launchers is occupied by 2 probable GOA missiles. The tower in the guidance area is unoccupied, but 2 electronic-associated vans are parked near its base. One probable SA-3 transporter, 3 unidentified vehicles/pieces of equipment, and 6 sets of bogie wheels are on the parking aprons to the rear of the site. rear of the site.

All 4 launch positions are occupied by launchers All 4 launch positions are occupied by launchers. Three of the launchers are occupied by probable GOA missiles, and 1 is occupied by a possible GOA missile. The tower in the guidance area is unoccupied, but 2 electronic-associated vans are near its base (photo annotation 1). Four launchers, 9 sets of bogie wheels, and 4 vehicles/pieces of equipment are observed on the parking aprons to the rear of the site (photo annotation 2)

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25X1	MISSION AND DATE	ACTIVITY	MISSION AND DATE	ACTIVITY	MISSION AND DATE	ACTIVITY	
	Table 17.	SA-3 Launch Area, Launch Site C*	Table 18	3. SA-3 Launch Area, Launch Site D*	Ta	ble 19. SAM Training Site A*	
25X1		All 4 launch positions are unoccupied. Guidance area occupied by at least 4 probable electronic-associated vans and a probable LOW BLOW radar. One of the 4 launch positions is occupied. However, because of cloud shadow the equipment cannot be identified. Probable positioning markers for the launcher and transporter can be observed at each launch position (Figure 20). Guidance area occupied by 4 electronic-associated vans and a probable LOW BLOW radar. One of the 4 launch positions is occupied by at least 4 unidentified vehicles/pieces of equipment. Probable positioning markers can still be observed at each launch position. Guidance area occupied by a LOW BLOW radar and 5 electronic-associated vans. Five vehicles/pieces of equipment are observed at 1 of the 4 launch positions (photo annotation 6). The remaining 3 launch positions are unoccupied. The probable positioning markers are still prominent. Guidance area occupied by a LOW BLOW radar and 5 electronic-associated		All 4 launch positions and the 2 probable missile-hold positions are unoccupied. Guidance area is occupied by a possible FAN SONG radar and at least 4 probable electronic-associated vans. All 4 launch positions and the 2 probable missile-hold positions are unoccupied. Probable positioning markers similar to those observed at Launch Site C are observed at the 4 launch positions. Guidance area is occupied by 7 probable electronic-associated vans and an unidentified probable guidance radar. All 4 launch positions and the 2 probable missile-hold positions are unoccupied. The probable positioning markers at the 4 launch positions still are prominent. The guidance area is occupied by a probable FAN SONG radar and 7 electronic-associated vans. The guidance area is occupied by a probable FAN SONG guidance radar and 7 electronic-associated vans (photo annotation 8). The remainder of the site is unoccupied. The probable positioning markers at the 4 launch positions still are prominent.			25X1 25X1 25X1
_		LOW BLOW radar and 5 electronic-associated vans (photo annotation 7).		inent.	**Activity confined to	Missions	

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	MAPS OR CHARTS	
-	ACIC chart, scale 1:200,000, Jun 66	
	ACIC chart, scale 1:200,000, Apr 64	
-	AMS map, scale 1:250,000, May 61	
_	DOCUMENTS	
5 <u>X</u> 1	1. CIA. PIC/JR1008/61, Surface-to-Air Missile Facilities, Kapustin Yar/Vladimirovka Missile Test Center, USSR, Mar 61 (SECRET	25X
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	RELATED DOCUMENT NPIC. R-126/63, Surface-to-Air Missile Facilities, Kapustin Yar/Vladimirovka Missile Test Center, USSR, Changes Since	25X
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